AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-5 (cancelled)

Claims 6-11 are pending in this application

Claims 6 and 7 are amended by this response. New claim 12 is added herein.

Claims 1-5 (canceled)

6. (currently amended) A vehicle-surroundings monitoring apparatus having a stereoscopic image detecting unit for detecting a stereoscopic image around a self vehicle, an image processor for processing said image into a distance image and a recognition computer for recognizing objects based on said distance image, comprising:

~~grouping~~ classifyig means for ~~grouping~~ classifying positional data representing a side wall of a particular one of said objects arranged along a boundary of a road on which said self vehicle is running and positional data of other ones of said objects; and

wall surface detecting means for detecting an outline of said side wall by performing a pattern matching of a side wall surface pattern to said positional data of said side wall, said side wall surface pattern being suitable for said particular object.

7. (currently amended) ~~The apparatus according to claim 6~~ A vehicle surroundings monitoring apparatus having a stereoscopic image detecting unit for detecting a stereoscopic image around a self vehicle, an image processor for processing said image into a distance image and a recognition computer for recognizing objects based on said distance image, comprising:

grouping means for grouping positional data representing a side wall of a particular object arranged along a boundary of a road on which said self vehicle is running; and

wall surface detecting means for detecting an outline of said side wall by performing a pattern matching of a side wall surface pattern to said positional data of said side wall, said side wall surface pattern being suitable for said particular object, wherein said wall surface detecting means is adopted to perform the pattern matching successively along a wall surface model represented by a combination of a plurality of nodes arranged at a predetermined interval ahead of said self vehicle.

8. (previously presented) The apparatus according to claim 7, wherein said wall surface detecting means is adopted to apply said side wall surface pattern to said positional data of said side wall within a searching area provided around each node of said wall surface model.

9. (previously presented) The apparatus according to claim 8, wherein said side wall surface pattern is represented by a weight coefficient being variable depending on a distance from a central point of said pattern.

10. (previously presented) The apparatus according to claim 9, wherein said wall surface detecting means is adopted to recognize a position of the central point of said side wall surface pattern as a node of said wall surface model when the degree of coincidence of the pattern matching becomes maximum while said side wall surface pattern is shifted towards a lateral direction.

11. (previously presented) The apparatus according to claim 10, further comprising correcting means for correcting coordinates of each node of said wall surface model set by said wall surface detecting means in the direction of bringing said each node close to a straight line connecting two adjacent nodes.

12. (new) A vehicle surroundings monitoring apparatus having a stereoscopic image detecting unit

for detecting a stereoscopic image around a self vehicle, an image processor for processing said image into a distance image and a recognition computer for recognizing objects based on said distance image, comprising:

classifying means for classifying positional data representing a sidewall of a particular one of said objects arranged along a boundary of a road on which said self vehicle is running and positional data of other ones of said objects; and

wall surface detecting means for detecting a curved outline of said side wall by performing a pattern matching of a side wall surface pattern to said positional data of said side wall, said side wall surface pattern being suitable for said particular object.